

Sustainment at the Nevada Test Site

**Steven Mortensen, FMP
Manager, Facilities Management**

**This work was done by National Security Technologies, LLC,
under Contract No. DE-AC52-06NA25946
with the U.S. Department of Energy**

How is Sustainment Defined?

- Facilities sustainment provides resources for maintenance and repair activities necessary to keep a typical inventory of facilities in good working order over a 50-year service life.
- Some cost models (but not all) include re-capitalization and/or operations.
- Sustainment of facility may exclude process operations performed within the facility.
- Questions:
 - Where is the separation for support systems?
 - Should there be two sustainment programs, one for General Facilities and one for Complex Facilities?

What Determines Level of Sustainment?

- Facility category (Mission Critical Facilities have high sustainment, using more than one funding stream).
- Facilities that meet sustainability requirements (high sustainability, provides long term value).
- Mission Dependent Not Critical (mixed drivers, makes site specific applications critical).
- Not Mission Dependent (must still maintain safe facilities, but can start downgrading others).

NTS Facilities

- Buildings: 537
Gross Square Feet: 3,278,158
Building RPV: \$1,616,660,695
Infrastructure: 720
Infra RPV: \$1,338,816,686
Deferred Maintenance: \$253,942,181
- Buildings targeted for sustainability assessment: 208
Mission Critical: 39 Buildings
Mission Dependent Not Critical: 120 Buildings
Not Mission Dependent: 378 Buildings

Sustainment Models

- Types of Models
 - DoD Models
 - DOE Models
 - Private Sector Models
- What works best for facilities that are on average 45 years old and have not had re-investments?
- Models assume that a building sustainment was implemented from day 1. This is not the case at the NTS.
- How do we quantify the “make-up” needs to make the chosen sustainment model valid?

Approach to NTS Sustainment

- Level of sustainment determined by:
 - Mission Critical versus Not Mission Dependent
 - Amount of deferred maintenance
 - Sustainment Audit results
 - Future of building
 - Projected uses for the building
 - Condition of supporting infrastructure
 - Prioritized list of facilities that are no longer needed
 - How building fits into Space Management Plan

Mission Critical versus Not Mission Dependent

- Mission Critical Facilities: At the NTS, these are typically Direct Funded Maintenance facilities and outside the General Facility Program.
- Mission Dependent, Not Critical: This classification has been based on history, not on future optimization.
- Not Mission Dependent: Required to keep the doors open, but we need to find ways to most effectively use existing resources, while reducing the Nevada Test Site footprint to the greatest extent possible.
- These terms were classified with one concept in mind, but must be managed using a new concept. These concepts can be in conflict.

Level of DM

- Level of Deferred Maintenance is used as a decision maker.
- Deferred Maintenance on Mission Critical facilities that have programs/goals in place are being managed programmatically.
- High Deferred Maintenance in a Mission Dependent, Not Critical building may be an indicator that a shift in historical perspective is needed. Changes take money to implement. In addition, the following activities are necessary:
 - Functional criteria redefined
 - Modifications
 - Move management
 - Excessing some existing buildings
- High Deferred Maintenance on Not Mission Dependent buildings indicates a candidate for disposal.

Building Audits

- Audit teams will inspect buildings for:
 - Energy savings opportunities
 - Infrastructure sustainment needs
 - Building condition
 - LEED conversion (potential for sustainability)
 - Power and water metering capabilities
- Baseline data will be used to evaluate buildings and suggest alternatives/solutions
- Criteria never used before must be integrated with historical criteria. This is no easy task.

Future Facility Needs

- Strategic planning is used to determine future mission requirements (Ten-Year Site Plan).
- Customer feedback is used concerning facility needs and includes tenant review of facilities that are in use.
- Facility Manager review of facilities is used to manage maintenance budgets to drive down deferred maintenance, as well as, improve building sustainability for enduring buildings.
- Unique missions/unique buildings are considered in terms of special activities and operations that will be performed.
- The Space Management Plan is used to reduce empty space and consolidate operations and activities where practical.

Infrastructure

- Sustainment of infrastructure at or near buildings will be evaluated.
- Infrastructure within the buildings will be evaluated by audit teams.
- A determination will be made whether or not buildings are cost effective based on infrastructure needs for upgrades.
- Geographically separated buildings need high levels of infrastructure support.

What Have We Been Doing?

- Ensuring proper collection of historical costs.
- Focusing all elements in the same department.
- Developing a ranking system that determines what needs to be sustained and at what level.
- Applying a consistent methodology to implement.

Sustainability at the NTS

- Using pre-determined program to evaluate a building for possible LEED standards.
- Performing a full assessment of 208 buildings.
- Using data two ways:
 - Follow the program and develop a rating for each building
 - Apply a graded approach to data to make decisions on buildings to recapitalize, projects needed in the future, and applicable changes in historical usage.

Sustainment at the NTS

- Examine historical patterns.
- Review current budget situation.
 - What is in our control?
 - What is not in our control?
 - Must always provide for the safe operation of all occupied buildings
- Drive our limited resources to get “biggest bang for the buck” (which may temporarily impact Deferred Maintenance goals).
- Use sustainability grades to help rank facilities.

Take A Ways

- New criteria are coming into play that change how we manage our facilities (no more business as usual).
- The NTS is moving forward aggressively to take on this challenge, but we are in the early stages.
- Ultimately, one issue that will continue to be problematic is needing money to save money.